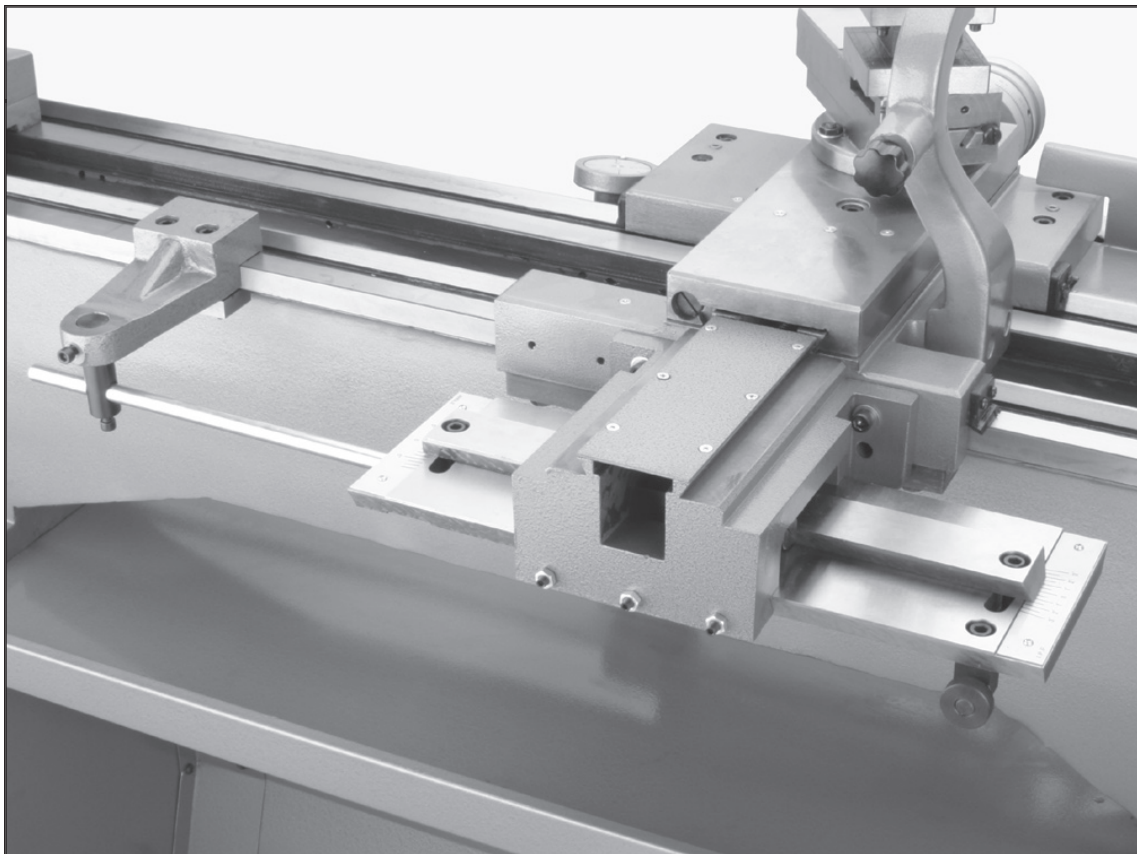


Grizzly *Industrial, Inc.*®

Taper Attachment for G4016 Gear Head Lathe

MODEL H0775

INSTRUCTION SHEET



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PARTS INVENTORY

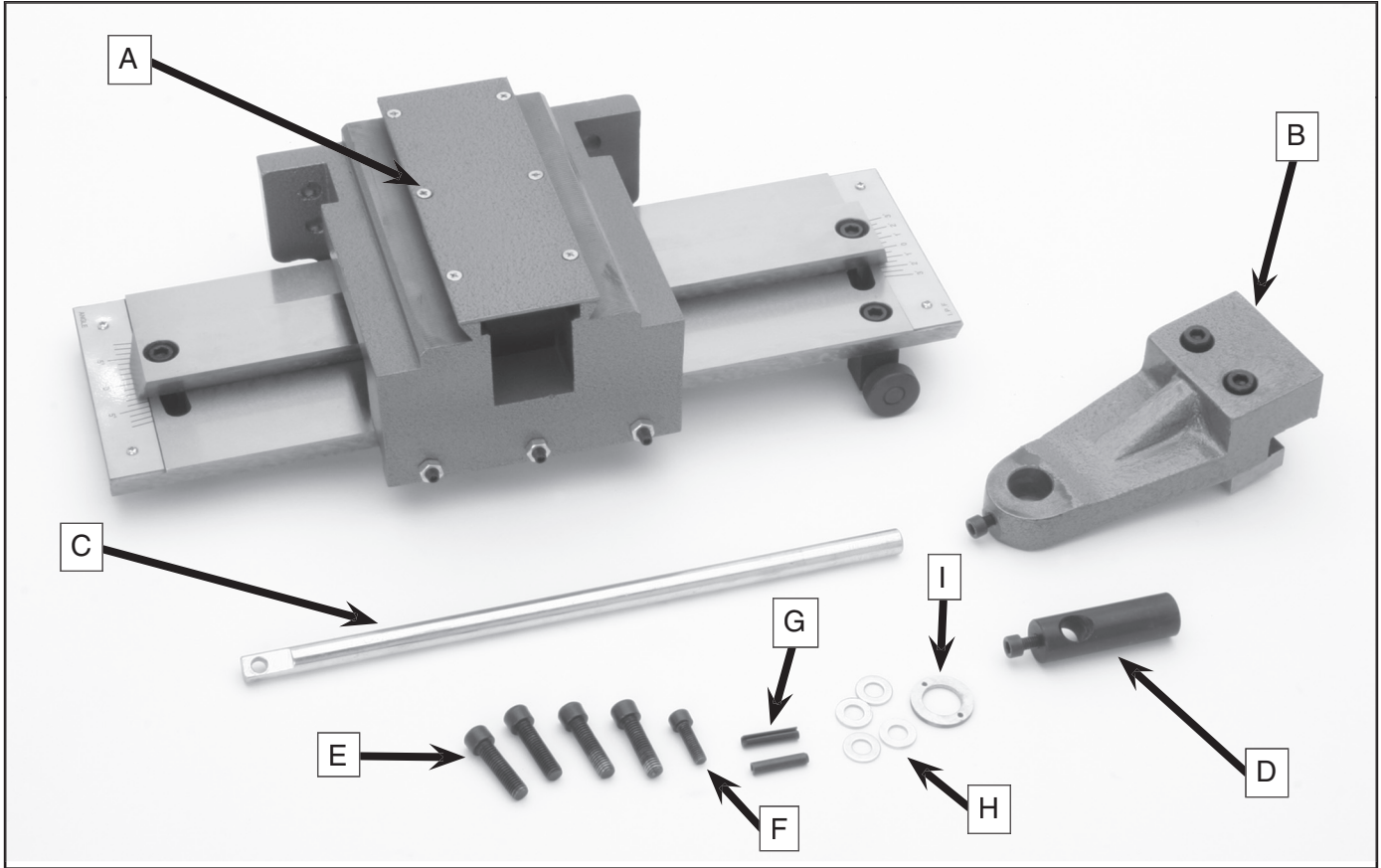


Figure 1. Main contents.

The Model H0775 Taper Attachment was carefully packed when it left our warehouse. If you discover that the taper attachment is damaged after you have signed for delivery, *please immediately call Customer Service at (570) 546-9663 for advice.*

Save the containers and all packing materials for possible inspection by the carrier or its agent. *Otherwise, filing a freight claim can be difficult.*

When you are completely satisfied with the condition of your shipment, you should inventory the contents.

Figure 1 - Main Contents.

A.	Main Body	1
B.	Deadman	1
C.	Support Rod	1
D.	Vertical Shaft with cap screw M6x1.0 - 16.	1
E.	Cap Screws M8-1.25 x 30.....	4
F.	Cap Screws M6-1.0 x 20.....	1

G.	Roll Pins	2
H.	Washers 8mm	4
I.	Washer 17mm.....	1

⚠ WARNING

Children may climb into plastic bags and suffocate. Keep all plastic bags included in packaging out of the reach of children.

⚠ CAUTION

Follow all safety procedures for metalworking when using this taper attachment.

INSTALLATION INSTRUCTIONS

The H0775 Taper Attachment mounts quickly to the back bed way of the G4016 Gear Head Lathe. Accurate tapers of up to 12" can be produced without repositioning the attachment. The H0775 features scales at both ends, reading inches-per-foot and degrees. An angle adjusting screw with fine threads achieves exacting control when setting tapers. Another feature is the ability to use it without disengaging the cross slide nut. This will allow it to be functional at any time by simply tightening the deadman.

The H0775 comes carefully packaged and it is coated with import grease to protect it from rust. You will need to clean all pieces thoroughly prior to installation and use. Use a solvent cleaner or citrus-based degreaser, like Grizzly's G7895 Citrus Degreaser. **For optimum performance from your machine, make sure you clean all moving parts or sliding contact surfaces that are coated.** Avoid chlorine-based solvents and gasoline as they may damage painted surfaces should they come in contact. Always follow the manufacturer's instructions when using any type of cleaning product.

Installing the Taper Attachment

1. Disconnect the lathe from its power source.
2. Remove the splash guard from the back of the lathe. If the lathe must be moved to allow access to the splash guard, consult the lathe manual for safe moving information. Note: *If you move the lathe, be sure to re-level it after returning the lathe to its final location.*

*At this time, please examine the end of the cross lead screw to see if its configuration matches that shown in **Figure 2**. If it does not, this taper attachment will not work unless you purchase a new cross slide assembly. Contact Grizzly for part numbers and order information. Also refer to the Parts List contained in the G4016 Lathe Instruction Manual for comparison.*

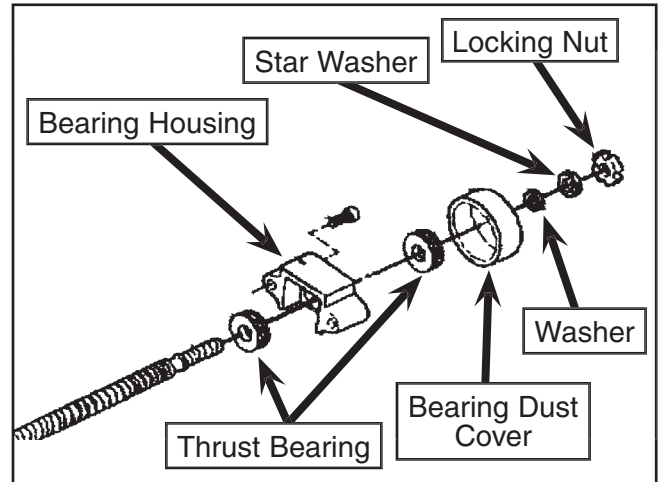


Figure 2. Cross Lead Screw components.

Consult **Figures 3 – 8** for installation details.

3. Remove the nut that holds the bearings and spacers in place at the end of the lead screw. You may need to bend one or more tangs of the star washer in order to accomplish this

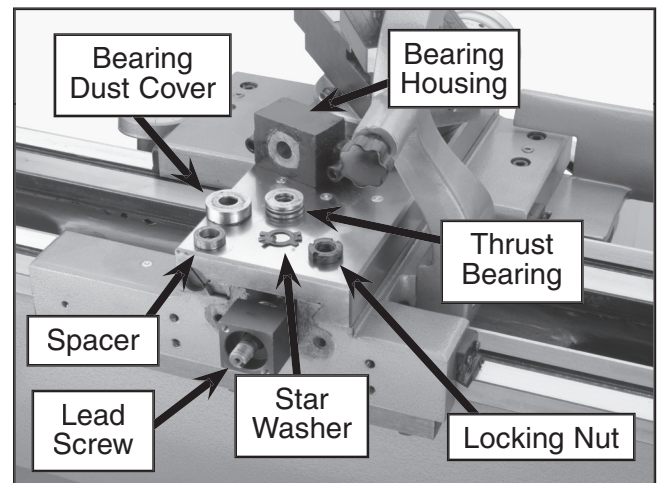


Figure 3. Lathe component identification.

4. Remove the spacer, bearing dust cover and thrust bearing from the end of the lead screw.
5. Remove the two cap screws that hold the bearing housing, along with the housing. Leave the remaining thrust bearing on the lead screw.

6. Remove the 6 philips head screws from the top cover plate of the main body. Set the screws and cover aside for later use in reassembling the main body.
7. Remove the end block and slide block from the main body by pulling up. These two blocks are attached by two cap screws. They are located in the opening you just uncovered in **Step 6**. The slide block is loosely pinned to a portion of the slide. Be careful not to lose the pin. Either set it aside for future installation or be sure to keep the pin in place.
8. Separate the end block and slide block by loosening the 2 cap screws in the slide block. Set the slide block and cap screws aside for **step 13**.
9. Assemble the end block and bearing (**Figure 4**). The pocket for the bearing and the threaded holes must be facing outwards when sliding the end block onto the lead screw.

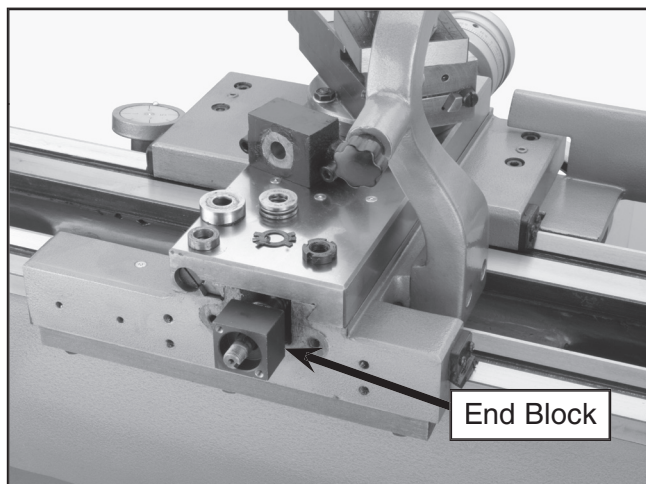


Figure 4. End block assembly.

10. Install the bearing, spacer, and star washer in the same order they were removed. These items will fit inside the opening in the end block.
11. Thread the nut onto the end of the lead screw and hand tighten while holding the cross slide handwheel. Do not over-tighten this nut. To check, turn the end block. Only a small amount of resistance should be felt. Adjust the nut as needed.

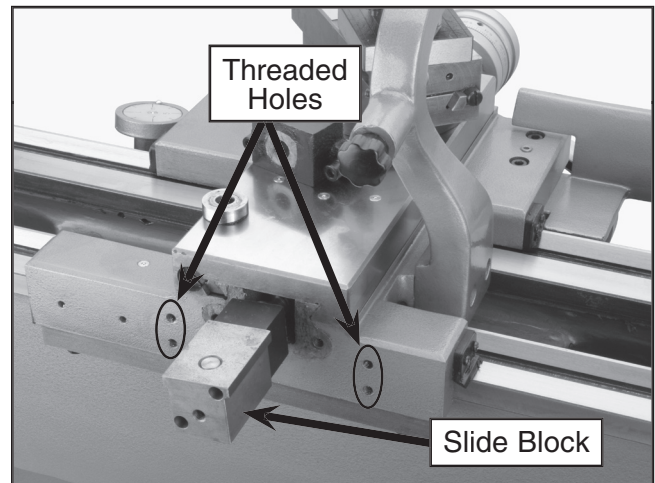


Figure 5. Slide Block Assembly.

12. Hold the nut in place and bend one or more tangs of the star washer to keep the nut in place.
13. Assemble the slide block to the end block using the two cap screws that were already in the slide block. The end block may need to be rotated to line up the holes (**Figure 5**).
14. There are four threaded holes (See **Figure 5**) on the rear of the carriage used to mount the main body to the lathe. Remove any paint or debris from these holes before attempting to mount the main body.
15. Align the four holes in the main body with the thread holes on the carriage. Use the four M8 - 1.25 x 30 cap screws to loosely fasten the main body to the lathe. A long-handled, ball end hex wrench works best for this step (**Figure 6**).

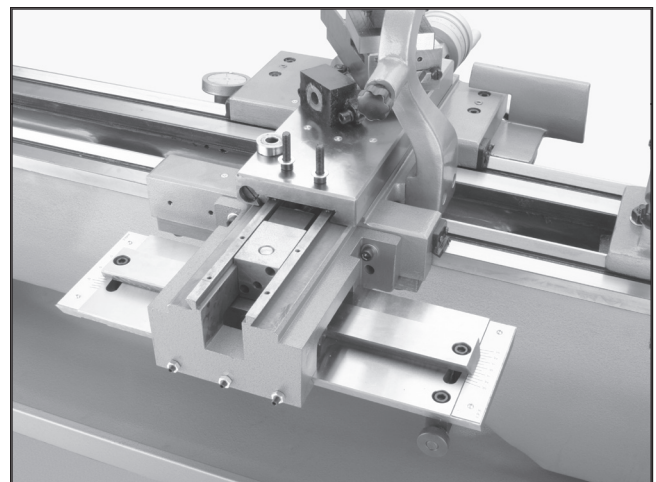


Figure 6. Main Body Assembly.

16. With the main body loosely fastened (see **Figure 6**), move the slide block back and forth, by either pulling/pushing on the lead screw or turning the cross slide handwheel. Stop when the pin in the slide block can be inserted into the hole in the slide. Push the pin, refer to **step 7**, into place to secure the slide block.
17. The dovetail ways of the cross slide must clear the top of the taper attachment and line up with the dovetails on the taper attachment. The holes in the taper attachment are oversized to allow for height adjustment. Adjust for clearance and check that the cross slide moves in and out, along its full range of motion, without increased resistance. When the slide moves unobstructed and smoothly, tighten the four mounting screws. *Note—If you are only able to use two of the holes after **step 16**, you will need to use the two roll pins included with the taper attachment. To do this you will need to drill holes through the main body and into the carriage. Use a #9 or a 5 mm drill bit. Be sure not to drill any deeper than 5/8" into the carriage. Once the holes are drilled, clean out any debris and insert the roll pins.*
18. Assemble the top cover plate, removed in **step 6**, using the six philips head screws (**Figure 7**).

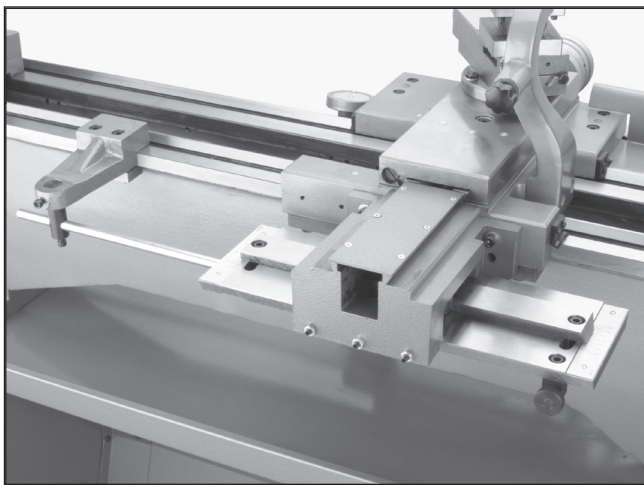


Figure 7. Support Rod and Deadman Assembly.

19. Attach the deadman to the lathe bed (**Figure 8**). The deadman is composed of a solid cast bracket and a loose clamping jaw. The bracket has two holes for screws that attach the clamping jaw. It also has a lip that must extend beyond the flat surface of the bed way. The clamping jaw has two set screws that allow for adjustments. These set screws should be adjusted until the clamping surfaces of the clamping jaw and bottom of the bed way are parallel when the clamping screws are tight. If these surfaces are not parallel, loosen the clamping screws and adjust the set screws as needed.

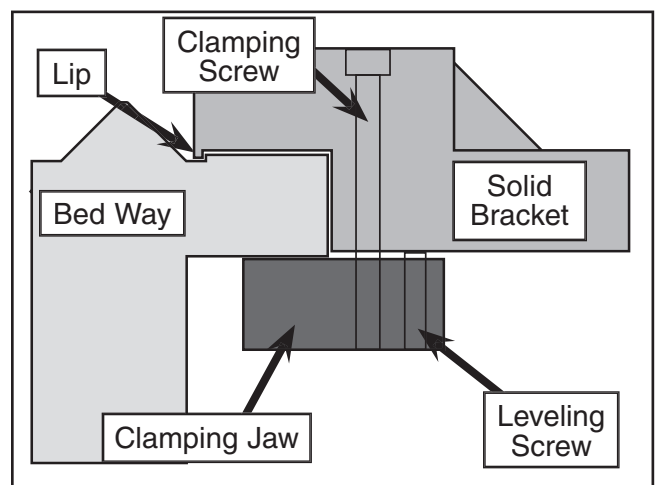


Figure 8. Components of the deadman.

20. A support rod attaches the deadman to the main body of the taper attachment. The rod attaches to the deadman by way of a hole in the vertical shaft. Insert the rod into the hole and secure in place by tightening the cap screw. The vertical shaft is inserted into the hole in the deadman and secured in position with a cap screw. Loosen the cap screws. Position the rod as shown in **Figure 7** and secure the rod to the bottom of the main body with the M6 cap screw provided.
21. Adjust the position of the vertical shaft until the support rod is parallel with the lathe bed. Tighten the cap screws. *Note—Position the deadman as close to the main body as possible for the best stability.*
22. Re-attach the splash guard to the lathe and reposition the lathe as needed.

OPERATION & ADJUSTMENTS

Angle Adjustments

The taper angle is adjusted by loosening the two cap screws at the ends of the dovetail slide on the taper attachment. The angle adjusting knob allows for fine control of the angle (**Figure 9**). There are two scales, one at each end of the main body. One is labeled for degrees and the other is labeled for inches-per-foot (I.P.F.). Using these scales will allow you to get close to the desired taper, but finer adjustments should be made with an indicator and test bar. Once the desired setting is met, tighten the two cap screws. Double check the setting to ensure accuracy.

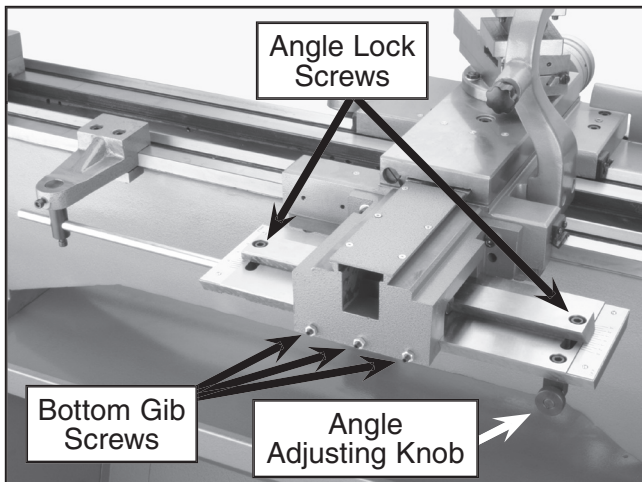


Figure 9. Taper Attachment Adjustments.

Top Gib Adjustments

The top gib is mounted to a slide and moves along the dovetail on the main body. The slide maintains the motion of the cross slide to produce the taper. If the gib is too loose, the angle can be affected and the finish will suffer. If the gib is too tight, the slide will not move freely.

1. To adjust the top gib, begin by removing the cap screw that holds the support rod to the main body.
2. Adjust the dovetail angle to zero.

3. There are two gib screws, for making adjustments, located just above and behind the dovetail on the main body. To tighten the gib, loosen the gib screw on the left (as viewed from the front of the lathe) and tighten the right screw. To loosen the gib, loosen the right screw and tighten the left screw.
4. The gib is properly adjusted when the slide can be moved by hand with moderate force.
5. Do not replace the support rod at this time.

Bottom Gib Adjustments

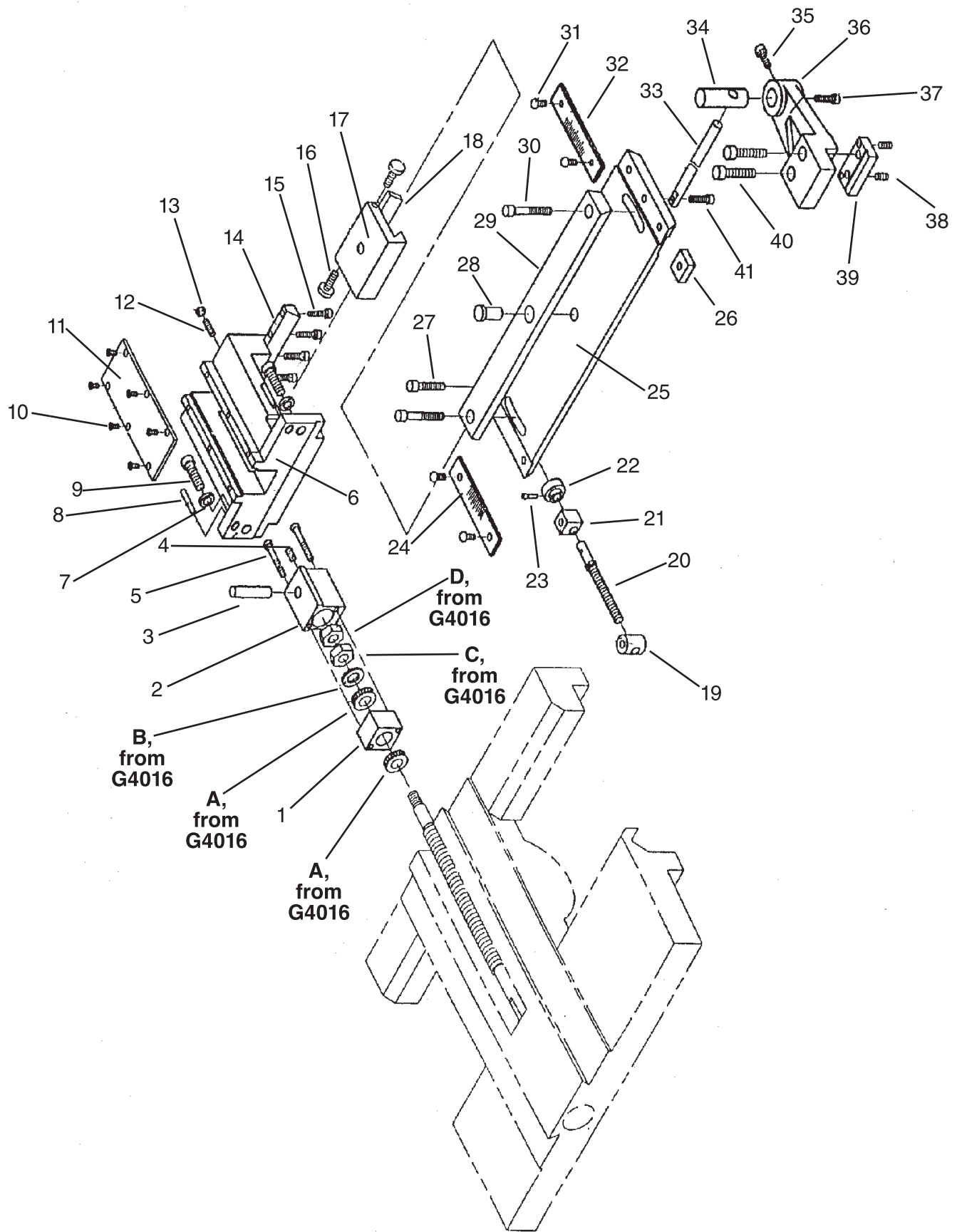
The bottom gib is mounted in the back inside edge of the main body casting. Three set screws hold it in place and are secured with nuts as shown in **Figure 9**. If the gib is too loose, finish problems will occur. If the gib is too tight, the slide will not move smoothly.

1. Loosen the three nuts and apply tension evenly to the three set screws. Use only moderate pressure when tightening these set screws. They should be tight enough to keep the slide from rocking in the main body casting. Check by rocking the slide by hand.
2. When satisfied with your results, tighten the nuts while maintaining the set screw position. Double check the slide to ensure that it moves smoothly. Re-adjust if necessary.
3. Re-attach the support rod to the main body.

Deadman Operation

To use the taper attachment, tighten the clamping screws on the deadman to secure it to the lathe bed. When not in use, loosen the clamping screws. Removal of the deadman or the taper attachment is not necessary when changing from taper turning to straight turning.

H0775 Parts Breakdown and List



H0775 Parts List

REF	PART #	DESCRIPTION
A	P51101	THRUST BEARING 51101
B	PH4016447	SPACER M12 X 8
C	PH4016448	STAR WASHER M12
D	PLN09	LOCKING NUT M12-1.25
1	PH0775001	END BLOCK
2	PH0775002	SLIDE BLOCK
3	PH0775003	PIN 12 X 50
4	PSS16M	SET SCREW M8-1.25 X 10
5	PH0775005	CAP SCREW M5-.8 X 45
6	PH0775006	MAIN BRACKET
7	PW01M	FLAT WASHER, 8MM
8	PH0775008	PIN 5 X 25
9	PSB13M	CAP SCREW M8-1.25 X 30
10	PS07M	PHLP HD SCR M4-.7 X 8
11	PH0775011	COVER
12	PSS25M	SET SCREW M6-1 X 20
13	PN01M	HEX NUT M6-1
14	PH0775014	SLANT IRON
15	PSB06M	CAP SCREW M6-1 X 25
16	PH0775016	ADJUSTING BLOCK
17	PH0775017	SLIDE
18	PH0775018	GIB
19	PH0775019	ROUND NUT

REF	PART #	DESCRIPTION
20	PH0775020	THREADED ROD
21	PH0775021	SUPPORTING BLOCK
22	PH0775022	HANDLE
23	PH0775023	PIN 3 X 18
24	PH0775024	SIGN PLATE
25	PH0775025	COPYING MODE
26	PH0775026	MOVING BLOCK
27	PSB13M	CAP SCREW M8-1.25 X 30
28	PH0775028	POSITIONING SCREW
29	PH0775029	COPYING PLATE
30	PSB13M	CAP SCREW M8-1.25 X 30
31	PH0775031	PHLP HD SCR M3-.5 X 8
32	PH0775032	SIGN PLATE
33	PH0775033	SUPPORTING ROD
34	PH0775034	VERTICAL ROD
35	PSB01M	CAP SCREW M6-1 X 16
36	PH0775036	BRACKET
37	PSB01M	CAP SCREW M6-1 X 16
38	PSS11M	SET SCREW M6-1 X 16
39	PH0775039	CLAMPING PLATE
40	PSB45M	CAP SCREW M8-1.25 X 45
41	PSB02M	CAP SCREW M6-1 X 20